

Application Serial No. 10/687,888
Filed October 17, 2003
Response dated January 30, 2007
Reply to Office Action mailed 11/3/06
Atty. Docket: KPF-30CD1

REMARKS

Claims 1-10 are pending in the present application. Claims 1-10 have been rejected. Claim 1 is presently amended. Based on the discussion below, it is believed that this application, including claims 1-10, is in condition for allowance.

Claim Rejections 35 U.S.C. § 102

The Examiner has rejected claims 1, 2, 9, and 10 under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 4,426,258 (Müller). In particular, the Examiner states that Müller teaches a timing motor and gear train having a stator plate and rotor, with gear trains above and below the stator plate. The Examiner further states that Müller teaches an alternative embodiment (at column 5, lines 1-15) having only a single connection through the stator plate, and that the shaft and gears are connected during assembly because the gears are larger than the through hole of a bearing in the stator. Applicants respectfully disagree with the rejection of claims 1, 2, 9, and 10 as anticipated by Müller.

Applicants note that presently amended claim 1 of the present invention recites that a stator includes "only two apertures... that are associated with interconnected components of a rotor and geartrain that extend therethrough," "a rotor ... in one of the two apertures," and a geartrain including meshing gears and gearshafts positioned on both opposite sides of the stator plate with "at least one gear and/or gearshaft comprising at least two pieces adapted to engage one another during

assembly to form a single connection of said geartrain through the other of the two apertures defined by said stator plate." Referring to Figs. 2A and 2B of the present application, as well as the disclosure at page 21, line 18 through page 24, line 15, it can be seen that the timing motor includes a rotor disposed in a first aperture of a stator plate, and the geartrain of the present application includes a splined shaft (74) and a splined socket (78) on gear (80), wherein the splined shaft and splined socket are adapted to engage one another through a second aperture in the stator plate. While the stator plate shown in figures of the present application may show additional orifices through the stator plate, those are not associated with any interconnecting members of a geartrain or geartrain and rotor. Thus, the present application supports the amendments to the claims of a stator plate having two apertures defined therein, with a rotor in one of the apertures and a geartrain through the other of the two apertures.

Applicants submit that Müller does not disclose a configuration of a timing motor having a stator plate with two apertures defined therethrough, with two apertures defined by the stator plate and associated with interconnected components of a rotor and geartrain that extend therethrough (with a rotor in one aperture and a geartrain connected through the other aperture). Rather, as can be seen from Fig. 2B, Müller includes three apertures defined through the stator plate, which are associated with interconnected components of a rotor and geartrain. The rotor (32) is disposed in a first bore (10), a spindle (18) is disposed through a second bore (14), and another spindle

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(44) is disposed through a third bore (40). Even the alternate embodiment of Müller discussed at column 5, lines 1-15, includes three apertures, each associated with interconnected components of a rotor and geartrain. At column 5, lines 1-15, Müller only states that the spindle (18) and seconds wheel (20a) would be omitted from the alternate embodiment. However, the guide tube (16) and minutes and hours gears and wheels would remain, with the guide tube (16) supporting these wheels, gears, and pinions still inserted into, and thus associated with, the bore (14) through the stator (2). Thus, by eliminating even this third orifice, the timing motor of the present application includes a geartrain that is reduced beyond that shown in Müller (and other prior art), and can be assembled in a blind assembly process. None of this is taught by Müller.

Thus, Applicants submit that claim 1 is not anticipated by Müller, and therefore respectfully request a withdrawal of the rejection of claim 1 over Müller. Applicants further submit that each of claims 2, 9, and 10 ultimately depend from claim 1. Since claim 1 is not anticipated by Müller, Applicants respectfully submit that neither are dependent claims 2, 9, and 10 anticipated by Müller, and respectfully request a withdrawal of the rejection of claims 2, 9, and 10.

Claim Rejections 35 U.S.C. § 103

The Examiner has rejected claims 3-5 under 35 U.S.C. § 103(a) as being unpatentable over Müller in further view of U.S. Patent No. 3,215,964 (Horbach). Applicants respectfully disagree.

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In order to establish a prima facie case of obviousness, the Examiner must show that the cited references, as combined, teach or suggest each of the elements of the claims. Claims 3-5 each ultimately depend from independent claim 1, and thus incorporate the limitations of that claim. At least for the reasons discussed above, Müller does not teach or suggest each and every element of claim 1. Further, it is submitted that Horbach fails to teach the elements of claim 1 that are missing from Müller. More specifically, Applicants submit that, like Müller, Horbach does not teach or suggest a stator includes "only two apertures... that are associated with interconnected components of a rotor and geartrain that extend therethrough," "a rotor ... in one of the two apertures," and a geartrain including meshing gears and gearshafts positioned on both opposite sides of the stator plate with "at least one gear and/or gearshaft comprising at least two pieces adapted to engage one another during assembly to form a single connection of said geartrain through the other of the two apertures defined by said stator plate," as presently recited in claim 1. Rather, Horbach is directed to bobbins used in manufacturing electrical coils. Thus, it is submitted that any combination of Müller and Horbach does not show each and every element of claims 3-5, as those claims are ultimately dependent on claim 1. Accordingly, Applicants respectfully request a reversal of the Examiner's rejection of claims 3-5.

Further, the Examiner has rejected claims 6-8 under 35 U.S.C. § 103(a) as being unpatentable over Müller in view of Plancon. Applicants respectfully disagree.

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In order to establish a prima facie case of obviousness, the Examiner must show that the cited references, as combined, teach or suggest each of the elements of the claims. Claims 6-8 each ultimately depend from independent claim 1, and thus incorporate the limitations of that claim. At least for the reasons discussed above, Müller does not teach or suggest each and every element of claim 1. Further, it is submitted that Plancon fails to teach the elements of claim 1 that are missing from Müller. More specifically, Applicants submit that, like Müller, Plancon does not teach or suggest a stator including "only two apertures... that are associated with interconnected components of a rotor and geartrain that extend therethrough," "a rotor ... in one of the two apertures," and a geartrain including meshing gears and gearshafts positioned on both opposite sides of the stator plate with "at least one gear and/or gearshaft comprising at least two pieces adapted to engage one another during assembly to form a single connection of said geartrain through the other of the two apertures defined by said stator plate," as presently recited in claim 1. Rather, while Plancon discloses a stepping motor rotor assembly, it does not disclose a split geartrain engaged in a single connection, having at least two pieces, through the stator plate. Thus, it is submitted that any combination of Müller and Plancon does not show each and every element of claims 6-8, as those claims are ultimately dependent on claim 1. Accordingly, Applicants respectfully request a reversal of the Examiner's rejection of claims 6-8.

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Conclusion

For the foregoing reasons, it is submitted that all claims are patentable, and a Notice of Allowance is respectfully requested.

No fee is believed due as a result of this communication. Any deficiencies or credits necessary to complete this communication should be applied to Deposit Account No. 23-3000.

The Examiner is invited to contact the undersigned attorney with any questions or remaining issues.

Respectfully submitted,
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